



## Issue 4

# The Second Year of Human Pregnancy: *In the Womb of the Family*

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No, I am not advocating another twelve months of pregnancy for humans. Many women are so tired of pregnancy and all its aches and pains by the end of nine months that they are even ready to go through giving birth to end it. But I am suggesting, following the lead of Swiss zoologist Adolf Portmann and educator Maria Montessori, that humans are born a year too early. They are not at all as developed at birth as other higher mammals. Colts and calves can stand up and walk, albeit shakily, to their mothers within a few minutes of birth. They can find their mothers' nipples and begin to nurse all on their own. They are following the herd or frisking around the field and playing with the other young within a few hours. But humans are born as helpless as much lower animals like mice.<sup>[1]</sup>

Portmann discovered that mammals have two modes of infancy, corresponding to their rank or complexity. Lower mammals give birth to “nest-dwelling” babies, like mice and squirrels, while higher mammals give birth to “nest-fleeing” babies, like foals or elephants.<sup>[2]</sup>

Lower mammals such as mice, rabbits, marsupials, and many insectivores have very limited openness to the world and ability for self-direction. They have simpler brains and nervous systems and less flexible instincts than higher mammals. Many drivers have encountered the inflexibility of the rabbit's instinct for escape. They will run straight up a road in the headlight of a car for hundreds of feet without veering to the right or left, which would enable them to escape easily.

Lower mammals are born blind, naked, and helpless in large litters of 5–22 young. They are called “nest-dwelling” because their young are unable to move at birth. They depend on

closeness to their mother for warmth. Their eyes and ears are sealed shut at birth and their brains need to grow to eight or ten times their birth size. At birth, they look like human embryos at twenty weeks. Nest-dwelling mammals have a very short gestation period of 20–30 days and only a few weeks of infancy. Mice are weaned at 3–4 weeks; rabbits at 4–5 weeks. They are already sexually mature at 2 to 5 months.[3]

The higher an animal, the richer its inner life and the more able it is to enter into relationships with what is outside it. Inner life grows in richness and intensity according to how many and complex are the animal's sensations of the outer world and how elaborate a picture it can form of that world. More complex brains and nervous systems make this richer inner life possible. A powerful inner life also allows higher mammals to engage in an elaborate social life that includes such behaviors as courtship, parenting, and enforcement of a hierarchy.[4]

Higher mammals usually have single or twin births. They are called “nest-fleeing” because their young are able to stand up, move about, and discover the world through their wide-open eyes and highly developed senses immediately after birth; their brains need to grow to only about twice their birth-size. They already have similar bodily proportions to adults and look like miniature adults. Their gestation period is much longer than nest-dwelling babies—from 11 months for horses to 22 months for elephants. They also have much longer periods of infancy before they are weaned. Horses are weaned at six months; elephants at 5–10 years. They have longer juvenile periods before they reach sexual maturity as well. Horses are two to four years old at sexual maturity; elephants are seventeen.[5]

Great apes like chimpanzees and gorillas follow the pattern of other higher mammals like horses, seals, whales, and lower primates. They are all nest-fleeing animals, as would be expected from their highly developed brains and nervous systems and their ability to learn and modify their behavior. They have long gestation periods: chimpanzees: eight-and-a-half months; and gorillas: nine months. Newborn primates are born with a great amount of independence and ability to move. Their eyes and ears are open, and they have immensely strong muscles in their arms and legs. They can cling to their mother even when she swings from branch to branch on tall trees. They can also clamber around, with great agility, often on their mothers. Their bodily proportions resemble adults; their brains are already half their adult mass.[6]

One would expect humans, because they have by far the richest inner life of animals, to follow the pattern of great apes. They should be born able to walk and speak and follow their family. They should be the most capable of nest-fleeing animals at birth; but quite the opposite is the case. They are born helpless as nest-dwelling animals like mice. Humans are a most peculiar mixture of helpless and alert, developed and undeveloped. Humans are usually born singly with open eyes and ears, eager to learn about the world like nest-fleeing babies, but unable to stand or move about or take care of themselves like nest-dwelling babies. Humans are twice as heavy at birth as great apes in order to accommodate brains that are also twice as heavy; yet the human infant's bodily proportions and tremendous rate of growth are typical of an embryo. Their heads are enormous in proportion to their tiny legs and arms and their brains still need to grow to four times the size they were at birth.[7]

One way to explain this mixture is that humans are born a year too early. At a year, human infants correspond to the stage of development of other higher mammals like foals and apes at birth. Many biologists suggest that the reason humans are born “too early” is the size of their skull compared to the woman’s pelvis. Others suggest that a longer gestation would be too great a **metabolic burden on the mother**. Yet there may be profound metaphysical reasons for this “premature birth.” Humans are rational and free, the only creatures on earth that are persons. As persons, humans are made for truth and friendship. Neither of these can be learned in the womb. The second period of embryonic growth, then, takes place in the family, which Portmann calls the “social uterus.”

The peculiar first year, which we spend as helpless nest-dwellers, but with open eyes and alert senses in the community of the mother and other human beings, is in all its particulars attuned to the demands posed by the special development of our relationship to the world. The beginning of thought, the learning of language, the attainment of upright posture—all these very special human characteristics are stamped on us in that decisive first year which, if we were merely mammals, we would have to spend in the mother’s body. We can thus say that the growing human being is born out of the mother’s body into a second uterus in which he traverses the second half of his embryonic life: this is the **social uterus**.

Humans need more than the nourishment and security of their mother’s body to develop normally as humans. Their openness to the world, rooted in their rationality, requires more sensible stimulation; their need for loving friendship must be fed and formed through the mother-child bond; their thinking needs the help of the family to teach them language. Even the purely physical characteristic of upright posture will not develop without the encouragement of the family. The spine of the human embryo already begins its transformation to the specifically human shape necessary for upright posture in the second uterine month, yet the physical structure is not enough. The social help of the family is decisive. **Upright posture** is a spiritual as well as physical achievement just as language is. There are some documented cases of **feral children** who were raised by animals from infancy. When they were discovered, they walked on all fours and could only bark or grunt. Depending on the age when they were abandoned, they may never have learned to walk upright or speak.

Remarkably, Maria Montessori uses the same metaphor of a second embryonic period to describe the state of the human infant after birth.

*Man seems to have two embryonic periods. One is pre-natal, like that of the animals; the other is post-natal and only man has this. The prolonged infancy of man separates him entirely from the animals, and this is the meaning we must give to it.[8]*

Every other other animal is born with the instincts for the behavior of its species. It is the openness of man, because of his rationality, that causes him to need this second embryonic period. Every other species of animal has a fixed environment like fish in the oceans or polar bears in the frozen North to which it is suited; it has a particular type of movement such as

swimming or flying or running; a particular food which it must eat to flourish; and very particular modes of courtship and social life. Only man has the ability to live and feel at home in every environment, from the Inuit in the Arctic snows to tribes in African jungles. Man can learn to eat many kinds of food and to speak many different languages. None of these are innate or given to man by his birth into a particular species.[9]

Philosopher Joseph Pieper also contrasts man's unique openness to the world with the restricted awareness of animals. Experiments show that animals cannot even notice things that do not immediately pertain to their biological life.

*But not everything that an animal, as such, can perceive (because he has ears to hear and eyes to see) really belongs to the world of such an animal.... For example, ... the crow does not even recognize the form of a resting grasshopper, but is only prepared to sense moving things.... This selective milieu, then, to which the animal is completely suited, but in which the animal is also enclosed (so much that the boundary cannot be crossed...); this selective reality determined and bounded by the biological purpose of the individual or species is called an environment.*  
[10]

This enclosure of every animal species in a particular environment differs from the openness to the world of humans because they have a mind. "By its nature, spirit (or intellection) is not so much distinguished by its immateriality, as by something more primary: its ability to be in relation to the totality of being." [11] Man's lack of development at birth gives him a plasticity to adapt, correlating physical and mental growth to his environment. For example, there are many physical changes in the tongue and mouth to learn a particular language; there are physical skills needed to carry burdens on the head or to climb trees.

This adaptability of the child to its environment is very different from the adult's relationship to his environment, as Montessori shows.

*The child stands in a different relationship to the environment. We may admire an environment. We may remember an environment, but the child absorbs it into himself. He does not remember the things that he sees, but he forms with these things part of his psyche.*[12]

The newborn child absorbs into itself and makes part of itself the language, climate, social customs, food, and religion of its family and society. French missionaries discovered a newborn infant abandoned by a stone-age tribe in Patagonia. They rescued and raised her. She became a typical contemporary French woman who spoke two European languages, studied biology at university, and was a practicing Catholic. Montessori comments, "In the space of eighteen years,

she has passed in very truth from the stone age to the atomic era.”[13] The woman became an educated European Catholic rather than a primitive animist tribeswoman by her own astonishing “work” of absorption.

Children have a limited sensitive period for this absorption of language and culture. The ability of the child to fit into any place and time period and culture by absorbing it into his psyche diminishes quickly with age. The first two years of life are the most sensitive period for learning language and by the end of the sixth year children have lost much of their flexibility for absorbing a new culture.

Most human cultures have grasped the appropriate way to introduce the infant to his environment, namely to keep the infant closely bound to its mother, as she carries on her normal life. Babies should not be isolated after their first few weeks, but taken everywhere with their mother so that they will hear the language of their mother and experience her interactions with society. One of the advantages of nursing, according to Montessori, besides the strengthening of the mother-child bond, is that it almost forces the mother to take the child everywhere with her. Adults should give infants the opportunities to develop their independence step by step, the natural way, by absorption. They should be slowly and carefully introduced to the riches of their culture and taught to take care of themselves as soon as they show signs of readiness to acquire a new skill.[14]

*Attachment parenting*, as advocated by pediatrician **William Sears and his wife Martha**, as well as the *ecological breastfeeding* advocated by **Sheila Kippley**, fit in many ways with Portmann’s and Montessori’s idea of a postnatal embryonic period. The mother is urged to nurse her baby for at least two years, to wear him in a sling or other carrier, and to sleep with him. They argue that this special relationship with the mother is especially important not only for the first postnatal year, but for the first three years. Their deepest concern is the bonding of the mother and child, which they believe is the foundation for the child’s life-long emotional security and ability to form stable relationships. Portmann and Montessori would emphasize that it is not enough for the baby to be next to the mother all the time; the mother must be actively living her life in society and the world so that she naturally introduces her child to her language, her work, and the world.

The difference in development between higher mammals and humans continues through the whole of human life. The long childhood of humans before achieving sexual maturity, as well as the long period of old age, more than twice that of great apes, both contribute to the intellectual and moral development of the human person as well as to the passing on of culture.[15]

*How long does it take for a child to develop compassion in its social relationships... to form values.... For our special kind of world experience, with its abundance of social relationships... it makes sense for the whole organism to have an extended juvenile period. The long period of childhood seems not simply a basic somatic situation but as*

*something utterly in keeping with the world-open existence of humans.*  
[16]

A lengthy adolescence requires wise mentors. Portmann reminds those who worry about having too many old people on earth that many of the greatest achievements of mankind have been the work of the aged. “Let us not forget that Sophocles wrote powerful plays when he was ninety years old, that Radetzky was eighty-two at the victory of Custoza...and that Titian completed his most compelling works when he was nearing one hundred.” [17] Wisdom is usually the fruit of a long, virtuous life, pondering the riches handed down to one from one’s predecessors. Human generation is not complete with producing a physical body; there must be spiritual generation as well, a passing on of human culture. Most obviously language but also art, science, and religion must be handed down from one generation to another. Here lies the importance of education, as **Pope Pius XI** points out:

*The blessing of offspring, however, is not completed by the mere begetting of them, but something else must be added, namely the proper education of the offspring.... Now it is certain that both by the law of nature and of God this right and duty of educating their offspring belongs in the first place to those who began the work of nature by giving them birth, and they are indeed forbidden to leave unfinished this work and so expose it to certain ruin.*

True human generation involves the spiritual and intellectual formation of a child as well as physical generation. Disregarding such formation leads to disaster. The first year of life is of the utmost importance in that spiritual formation. It must be a time of warmth, faithful attentive love, and a rich initiation into the language and culture of the family.

The first year of life or the second embryonic period of humans is a particularly strong sign of their unique way of being an animal. It corresponds to their rationality. “Constrained by environment and protected by instinct: simply and briefly, that is how we can describe the behavior of animals. In contrast, human behavior may be termed open to the world and possessed of freedom of choice.” Other higher mammals, as noted above, are born with highly developed bodies and instincts as soon as they are born. They are born into an environment and possess instincts for a way of life that corresponds only to that environment. They have no interest in knowledge or beauty for its own sake; they cannot even notice things before their eyes that have no bearing on their physical lives. Horses do not admire sunsets. Beasts have social instincts, but not friendship. In contrast, humans are born helpless but alert. They cannot discover the world and think about it in an ordered way or learn to behave in a truly human way—choosing what is good and beautiful, spurning what is bad and ugly—without the constant care of a family. Humans who are made for love can only learn about love in the second womb of the home.

The state of helplessness into which humans are born is a sign of our ontological dependence on God. It ensures that we begin our lives in the truth of our absolute insufficiency. We are reminded of our dependence whenever we see a baby. One of the most astonishing things about the Incarnation is that God chooses to become a helpless infant, first in the womb of his mother and then in the womb of the family. God himself depended on his parents to teach him to walk and talk in his second embryonic period. God chooses to stoop so low that He, the omnipotent, becomes powerless; He, Wisdom and Word, becomes ignorant, in his human intellect. God's act of humility is a profound act of mercy; He identifies with the objects of His mercy so powerfully that He takes on their deficiencies so that he can elevate them above what any heart could have conceived.

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[1] Adolf Portmann, *A Zoologist Looks at Humankind*, trans. Judith Schaeffer (New York: Columbia University Press, 1990), 19–62. Hereafter cited as Portmann, 1990.

[2] Portmann, 1990, 20–49.

[3] Ibid., 19–22.

[4] Adolf Portmann, *Animal Forms and Patterns: A Study of the Appearance of Animals* (New York: Schocken Books, 1967), 57–58.

[5] Portmann, 1990, 22–24.

[6] Ibid., 24–31.

[7] Ibid., 1990, 31–62.

[8] Maria Montessori, *The Absorbent Mind*, 4th ed., trans. Claude A. Claremont (Madras, India: The Theosophical Publishing House, 1963), 61.

[9] Maria Montessori, *The Absorbent Mind*, 1st ed., trans. Mario Montessori (Madras, India: The Theosophical Publishing House, 1949), 91–95.

[10] Joseph Pieper, “The Philosophical Act” in *Leisure the Basis of Culture* (South Bend, IN: St. Augustine Press, 1998), 82–84.

[11] Joseph Pieper, “The Philosophical Act,” 85.

[12] Maria Montessori, *The Absorbent Mind*, 4th ed., 62–63.

[13] Ibid., 59.

[14] Montessori, *The Absorbent Mind*, 4th ed., 105–09.

[15] Portmann, 1990, 142.

[16] Ibid., 146–147.

[17] Ibid., 146.

[18] Ibid., 79.